

# Best Management Practices

MISSOURI DEPARTMENT OF CONSERVATION



## *Fat pocketbook*

*Potamilus capax*

**Common name** • Fat pocketbook

**Scientific name** • *Potamilus capax*

**Federal status** • Endangered

**State status** • Endangered

### Ecology

The fat pocketbook is generally found in large rivers and has been found in a broad range of habitat and substrate types. It seems to prefer, however, a mixture of silt, mud and sand, or sticky mud.

Mussels are filter feeders that pump water through their siphons to collect food particles from the water. They gather necessary nutrients and remove unwanted toxins from the water through this process. Almost all mussel species depend on a fish host to complete their life cycle. Mature adult mussels release glochidia (the immature stage), which must attach to the gills or fins of fish to complete their development. After an average of 2-4 weeks, the newly metamorphosed juveniles drop from the fish; and if they land in suitable habitat, they will burrow into the substrate and grow to repeat the cycle. Fish are an important link in the reproductive cycle of mussels and, typically, only certain species of fish are suitable hosts. The fish host appears to be the freshwater drum. The fat pocketbook spawns from late August through September and releases glochidia the following year in June through July.

### Reasons for Decline

Although historic records suggest that the fat pocketbook was present throughout river basins in the Midwestern United States, it was not considered common. Channel dredging and maintenance activities related to navigation and flood control have had the greatest negative impact on the habitat of the fat pocketbook in Missouri and throughout its historic range. These practices have reduced available stable sandbars and other suitable habitat, increased siltation and possibly eliminated or reduced numbers of fish hosts.

### Specific Recommendations

Although the fat pocketbook prefers deep waters in large rivers, repeated dredging and channelization activities destroy mussel habitat and may kill or remove the mussels themselves.

In addition, impoundment structures tend to promote siltation, which is known to smother and kill mussels.

→ A survey of the waterways in the project area must be conducted by a trained biologist in order to identify occurring populations of this species.

→ Dams and other water impoundment structures that alter water depth and turbidity and promote siltation should be avoided in rivers that contain habitat for the fat pocketbook.

→ Dredging and channelization projects should not be done near or on existing river islands.

→ No work should be allowed below the high bank of the stream between May 1 to July 31 and August 25 to September 30.

→ All equipment that enters the waterway should be washed and checked for juvenile zebra mussels before entering another body of water. This will help prevent the spread of this exotic European mussel species that can negatively affect native aquatic organisms and mussel species like the fat pocketbook.

### General Recommendations

Refer to Management Recommendations for Construction Projects Affecting Missouri Streams and Rivers.

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